

# Don't Be Guilty of These Errors in Vaccine Storage and Handling

The following are frequently reported errors in vaccine storage and handling. Some of these errors are much more serious than others, but none of them should occur. Be sure your clinic or practice is not making errors such as these.

## Error #1: Designating only one person in the office to be responsible for storage and handling of vaccines, instead of a minimum of two.

It's important to train at least one back-up person to learn proper storage and handling of vaccines. The back-up person should be familiar with all aspects of vaccine storage and handling, including knowing how to handle vaccines when they arrive, how to properly record refrigerator and freezer temperatures, and what to do in case of an equipment problem or power outage.

## Error #2: Recording temperatures only once per day.

Temperatures fluctuate throughout the day. Temperatures in the refrigerator and freezer should be checked at the beginning and end of the day to determine if the unit is getting too cold or too warm. Ideally, you should have continuous thermometers that measure and record temperatures all day and all night. A less expensive alternative is to purchase maximum/minimum thermometers. Only certified thermometers should be used for vaccine storage. It's also a good idea to record the room temperature on your temperature log in case there is a problem with the refrigerator or freezer temperature. This information may be helpful to the vaccine company's telephone consultant in ascertaining whether your vaccine can still be used.

## Error #3: Recording temperatures for only the refrigerator or freezer.

If your facility administers varicella vaccine or live attenuated influenza vaccine (LAIV), you should have certified thermometers in both the refrigerator and the freezer. Rather than buying cheap thermometers that may not accurately measure the temperature, buy quality thermometers that will last for years.

## Error #4: Documenting out-of-range temperatures on vaccine temperature logs and not taking action.

Documenting temperatures is not enough. Acting on the information is even more important! So, what should you do? Notify your supervisor whenever you have an out-of-range temperature. Safeguard your vaccines by moving them to another location and then determine if they are still useable. Check the condition of the unit for problems. Are the seals tight? Is there excessive lint or dust on the coils? After you have made the adjustment, document the date, time, temperature, what the problem was, the action you took, and the results of this action. Recheck the temperature every two hours. Call maintenance or a repair person if the temperature is still out of range.

## Error #5: Throwing away temperature logs at the end of every month.

It's important that you keep your temperature logs for at least three years. As the refrigerator ages, you can track recurring problems. If temperatures have been documented out of range, you can determine how long this has been happening and take appropriate action. It's also a great way to lobby for a new refrigerator.

## Error #6: Storing vaccine in the refrigerator in a manner that may inappropriately affect its temperature.

The temperature in the vegetable bins, on the floor, next to the walls, in the door, and near the cold air outlet from the freezer may differ significantly from the temperature in the body of the refrigerator. Always store vaccines in their original packaging in the body of the refrigerator away from these locations. Place vaccine packages in such a way that air can circulate around the compartment. Never overpack a refrigerator compartment.

## Error #7: Storing frozen vaccines in a dorm-style refrigerator.

Varicella and LAIV must be stored in a freezer that has its own external door separate from the refrigerator. No matter how hard you try to adjust the temperature to +5°F in a dorm-style refrigerator's freezer, you won't be able to reach this low temperature in the freezer, and you'll probably freeze the rest of your vaccines in the refrigerator!

## Error #8: Inadvertently leaving the refrigerator or freezer door open or having inadequate seals.

Remind staff to close the unit doors tightly each time they open them. Also, check the seals on the doors on a regular schedule, and if there is any indication the door seal may be cracked or not sealing properly, have it replaced. The cost of replacing a seal is much less than replacing a box of pneumococcal conjugate or varicella vaccine.

## Error #9: Discarding multi-dose vials 30 days after they are opened.

Don't discard your vaccines prematurely. Almost all multi-dose vials of vaccine contain a preservative and can be used until the expiration date on the vial unless there is visible contamination. However, you must discard multi-dose vials of reconstituted vaccine (e.g., meningococcal, yellow fever) if they are not used within a defined period after reconstitution. Refer to the vaccine package inserts for additional information.

## Error #10: Not having emergency plans for a power outage or natural disaster.

Every clinic should have a written Disaster Recovery Plan that identifies a refrigerator with a back-up generator in which to store vaccine in the event of a power outage or natural disaster. Consider contacting a local hospital or similar facility to be your back-up location if you should need it.

## Error #11: Storing food and drinks in the vaccine refrigerator.

Frequent opening of the refrigerator door to retrieve food items can adversely affect the internal temperature of the unit and damage vaccines.

